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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NG, CHRISTINE Y	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/811,587	SAKAI, YASUSHI	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 10-13 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,425,021 to Derby et al in view of U.S. Patent No. 5,436,617 to Adam et al.

Referring to claims 1 and 16, Derby et al disclose in Figure 8 a method for controlling data transmission in a network system configured by a plurality of nodes including a first node (intermediate node 71), a second node (source node 70), and a third node (destination node 72), wherein the first node has a plurality of ports (2,9) including a first port (2) connected to the second node and a second port (9) connected to the third node, and the first node enables data received by the first port from the second node to be transmitted from the second port to the third node, and wherein each node has address information (routing label), the received data including the address information (Figure 4, EOF flag 43) of the node to which the received data is addressed. Refer to Column 4, line 65 to Column 5, line 16; Column 6, line 66 to Column 7, line 13; and Column 9, line 50 to Column 10, line 17. The method comprises the steps of:

Comparing the address information indicating the first node with the address information included in the received data (Figure 4, EOF flag 43). As shown in Figure 8,

a packet from source node 70 can be addressed to destination node 72 using the routing packet 1,9,1,40, with '40' specifying a subnode within destination node 72 as the destination of the packet. Since the routing packet does not specify any subnode within intermediate node 71 as the destination of the packet, intermediate node 71 passes the packet on to destination node 72 after comparing its own address information with the routing labels 40-42 and EOF flag 43 of the packet. Link 86 shows a situation of when a packet can destined for intermediate node 71, with the packet containing one routing label. Refer to Column 9, line 50 to Column 10, line 17.

Derby et al do not disclose temporarily disconnecting the third node from the first node when the received data is not addressed to the third node.

Adams et al disclose in Figure 1 temporarily disconnecting a third node (any of terminals 0011-1010) from the first node (MPR-A) when the received data (Figure 1A) is not addressed to the third node. MPR-A maintains the connection between a receiving port and the port to which the addressee station is connected, and disconnects those ports from all the others (setting them to a 0 state). Refer to Column 5, lines 57-66 and Column 6, lines 26-42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include temporarily disconnecting the third node from the first node when the received data is not addressed to the third node; the motivation being to save resources by disconnecting a channel if it is not in use.

Referring to claim 2, Derby et al do not disclose temporarily disconnecting includes dividing the network system into a plurality of sub-network systems, and

wherein the method further comprises permitting data transmission within each of the sub-network systems.

Adams et al disclose temporarily disconnecting includes dividing the network system into a plurality of sub-network systems (transmitting/receiving ports and all other ports), and wherein the method further comprises permitting data transmission within each of the sub-network systems. The first sub-network is the transmitting and receiving ports performing data transmission between each other. The second sub-network is all other ports that are set to an idle state (0) which also perform data transmission amongst each other. Refer to Column 3, lines 12-18; Column 3, lines 45-53 and Column 6, lines 38-42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include temporarily disconnecting includes dividing the network system into a plurality of sub-network systems, and wherein the method further comprises permitting data transmission within each of the sub-network systems; the motivation being in order to facilitate data transmission in all parts of the network.

Referring to claim 3, Derby et al do not disclose wherein the disconnecting step includes idling the second port.

Adams et al disclose in Figure 1 that the disconnecting step includes idling the second port (any of ports 2-6). The ports that are not the destination port are set to an idle state of (0). Refer to Column 1, lines 12-13; Column 5, lines 57-66 and Column 6, lines 38-42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the disconnecting step includes

idling the second port; the motivation being so that the port can be temporarily idled and then immediately reactivated when there is data transmission.

Referring to claim 4, Derby et al do not disclose that the method further comprises the steps of: monitoring data transmission at each port and idling all of the ports when data transmission is completed at all of the ports.

Adams et al discloses in Figure 1 that the method further comprises the steps of: monitoring data transmission at each port (ports 1-6) (Refer to Column 3, lines 54-58); and idling (returning ports to an idle state (0)) all of the ports (ports 1-6) when data transmission is completed at all of the ports (Refer to Column 3, lines 54-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include monitoring data transmission at each port and idling all of the ports when data transmission is completed at all of the ports; the motivation being to save resources by disconnecting a channel if it is not in use.

Referring to claim 10, Derby et al disclose in Figure 8 a data transmission controller incorporated in first node (intermediate node 71) for enabling data received by first port (2) from a second node (source node 70) to be transmitted by a second port (9) to a third node (destination node 72), wherein the data includes packet information containing a data origination address (Figure 4, ANR label-1 40) and a data destination address (Figure 4, EOF flag 43). Refer to Column 4, line 65 to Column 5, line 16; Column 6, line 66 to Column 7, line 13; and Column 9, line 50 to Column 10, line 17. The data transmission controller comprises:

[Figure 8] A first interface (internode link 86) connected to first port (2).

[Figure 8] A second interface (internode link 88) connected to the second port (9).

A network information memory (topology database) for storing first address information (NetID.nodeID) of the first node, second address information (NetID.nodeID) of the second node, and third address information (NetID.nodeID) of the third node. Refer to Column 4, lines 58-64; Column 5, lines 1-3; and Column 8, lines 9-15 and lines 49-59.

[Figure 2] A packet determiner (adapters 20-22, 24-26 and 14-16) connected to the first and second interfaces for comparing the data destination address with the second and third address information to determine an addressee of the received data. Refer to Column 5, lines 52-60.

[Figure 2] An interface control circuit (packet switching bus 23) connected to the first and second interfaces, the packet determiner, and the network information memory for controlling the first and second interfaces, wherein the interface control circuit processes the data when the data is addressed to the first node and transmits the data to the third node from the second port when the data is addressed to the third node. Refer to Column 5, lines 52-60. Refer to the rejection of claims 1 and 16.

Derby et al do not disclose controlling the second interface when the data is not addressed the third node to idle second port and disconnecting the second port to stop data transmission by the second port the third node. Refer to the rejection of claims 1 and 16.

Referring to claims 11 and 12, refer to the rejection of claims 2 and 3.

Referring to claim 13, refer to the rejection of claim 4.

Referring to claim 14, refer to the rejections of claims 1-3 and 10-12.

Referring to claim 15, Derby et al disclose that the first node takes the received data when the received data is addressed to the first node. If the packet has a destination field destined towards intermediate node 71, as shown by internode link 86, intermediate node 71 will accept the packet. Refer to Column 9, line 50 to Column 10, line 17.

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,436,617 to Adams et al.

Referring to claim 5, Adams et al disclose in Figures 1 and 2 a data transmission controller comprising:

[Figure 1] A plurality of ports including a first port (port 1) connected to a first node (terminal 0001) and a second port (any of ports 2-6) connected to a second node (any of terminals 0011-1010). Refer to Column 4, lines 51-62.

[Figure 2] A network information memory (memory 13) for storing node information (Table 1) of first (terminal 0001) and second (any of terminals 0011-1010) nodes. Refer to Column 5, lines 41-55.

[Figure 2] A packet determiner (comparator/reader 11) connected to the first (port 1) and second (any of ports 2-6) ports and network information memory (memory 13) for determining with the node information an addressee of data received by the first port (port 1) from the first node (terminal station 0001). Refer to Column 5, lines 57-66 and Column 6, lines 26-42.

[Figure 2] An interface control circuit (switch controller 14) connected to the packet determiner (comparator/reader 11) to temporarily disconnect the second port (any of ports 2-6) when the data is not addressed to the second node (any of terminals 0011-1010). Refer to Column 5, lines 57-66 and Column 6, lines 26-42.

Adams et al do not disclose disconnecting the second node from the second port when the data is not addressed to the second node.

However, Adams et al disclose disconnecting a port when it is not connected to the node that is being addressed. Refer to Column 5, lines 57-66. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include disconnecting the node from the port when the data is not addressed to the node, the motivation being that the port connects the node to the network; disconnecting the port prevents the node from accessing the network.

Referring to claim 6, Adams et al disclose in Figure 2 that the interface control circuit (switch controller 14) permits data transmission within a sub-network system including the second node (any of terminals 0011-1010). All other ports, besides the transmitting and receiving ports, are disconnected "but connected to each other and returned to the (0) state to allow one or more than one further iteration..." (Column 3, lines 45-53).

Referring to claim 7, Adams et al disclose in Figure 2 that the data transmission controller further comprises a plurality of interfaces (cross-point switch 9) respectively connected between the ports (ports 7) and the interface control circuit (switch controller 14), wherein the interface control circuit (switch controller 14) controls the interface

(cross-point switch 9) associated with the second port (any of ports 2-6) to idle the second port and temporarily terminates the connection between the second port and the second node (any of terminals 0011-1010). Refer to Column 6, lines 26-42.

Referring to claim 8, Adams et al discloses in Figure 2 that the interface control circuit (switch controller 14) monitors data transmission at the ports (ports 1-6) and idles (returning ports to an idle state (0)) all of the ports after data transmission is completed at the ports. Refer to Column 5, lines 54-58.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,436,617 to Adams et al in view of U.S. Patent No. 5,687,319 to Cook et al.

Adams et al do not disclose wherein the data transmission controller is one of a plurality of data transmission controllers provided in each of a plurality nodes configuring a network system, each of the nodes transmitting to other nodes a packet including a physical node number when the network system undergoes a bus reset, and wherein the network information memory stores the physical node number of each node as the node information.

Cook et al disclose that whenever a node is added to or removed of a bus, a bus reset occurs which changes the bus topology. To determine the new network topology, a self ID phase occurs. During the self ID phase, each node on the bus is assigned a unique physical ID and transmits packets onto the cable that includes the physical ID. Based on the information in the self ID packets, the network topology is obtained. Refer to Column 2, lines 5-38. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the data transmission

controller is one of a plurality of data transmission controllers provided in each of a plurality nodes configuring a network system, each of the nodes transmitting to other nodes a packet including a physical node number when the network system undergoes a bus reset, and wherein the network information memory stores the physical node number of each node as the node information. One would be motivated to do so because a bus reset causes a change in network topology and the system must have a method of determining the new topology in order to facilitate data transmission.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng
June 30, 2005

RICKY NGO
PRIMARY EXAMINER
7/8/05